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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/812,713	03/19/2001	Cha Zhang	MS1-534US	9718
22801	7590	11/04/2004	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			RAO, ANAND SHASHIKANT	
			ART UNIT	PAPER NUMBER
			2613	
DATE MAILED: 11/04/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/812,713

Applicant(s)

ZHANG ET AL.

Examiner

Andy S. Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-76 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-76 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed on 6/14/04 have been fully considered but they are not persuasive.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-76 remain rejected under 35 U.S.C. 102(e) as being anticipated by Shum et al., (US Patent 6,476,805 hereinafter referred to as "Shum"), as was set forth in the previous Office action of 4/28/04.

4. The Applicants present four arguments contending the Examiner's rejection of claims 1-76 under 35 U.S.C. 102(e) as being anticipated by Shum et al., (US Patent 6,476,805 hereinafter referred to as "Shum"), as was set forth in the previous Office action of 4/28/04. However, after a careful review of the arguments presented the Examiner must respectfully disagree for the reasons that follow and maintain the grounds of rejection.

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Firstly, the Applicants argue that Shum fails to disclose “selectively dividing the plurality of frames into a plurality anchor frames and a plurality of predicted frames...” as in the claims (Paper of 4/28/04: page 23, lines 1-22; page 24, lines 1-3; page 25, lines 4-22; page 26, lines 1-14; page 27, lines 14-22; page 28, lines 1-19), as in claims 1, 40, and 57. However, the Examiner respectfully disagrees. It is noted that the citations in question establish dividing the plurality of frames into one or more reference fields and a corresponding plurality of predicted fields. Now the question becomes whether those plurality of reference fields read on anchor frames, as in the claims. It is noted that since Shum discloses rapid serial rendering operations for the light fields (Shum: column 12, lines 15-20), reference fields are manipulated to produce a series of predicted light fields, and thus the reference fields as for rapid serial rendering operations are key-frames or anchor frames for the rendering of predicted light field sequences. Accordingly, the Examiner maintains that the reference frames as used for rapid serial rendering operations are key-frames or anchor frames since they are used for a sequence of frames of a scene (Shum: column 12, lines 1-6).

Secondly, the Applicants argue that Shum fails to disclose “independently encoding each of the anchor frames...” as in the claims (Paper of 4/28/04: page 24, lines 4-13; page 26, lines 15-22). The Examiner respectfully disagrees. It is noted that the light fields produced by the wavelet blocks of the compression unit are the same reference light fields of the previous are because Shum discloses that the reference light fields are transformed into low resolution versions for rapid serial rendering operations, and thus, the use of wavelet transforms would be a way to accomplish this features. Accordingly, the Examiner maintains that this feature is met, as well.

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Additionally, the Applicants argues that Shum fails to disclose "encoding a prediction residue..." as in the claims (Paper pf 4/28/04: page 24, lines 13-22; page 27, lines 1-13). The Examiner respectfully disagrees. It is note that while the column 15 citations discloses an analysis filter bank for producing subbands, the column 40 citation additionally notes that the analysis filter bank is used in conjunction with a final predictor for producing MB residuals which are encoded. Accordingly, the Examiner maintains that this feature is met, as well.

Lastly, the Applicants argue that Shum fails to disclose "...accessing index data..." as in the claim (Paper of 4/28/04: page 28, lines 19-22; page 29, lines 1-2). The Examiner respectfully disagrees. It is noted that Shum in the column 13 citations discloses a flag for accessing additional enhancement field information where the enhancement field information is index flag information for indicating the presence of anchor frames (Shum: column 21, lines 1-15), as in the claim.

### *Conclusion*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (703)-305-4813. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S. Kelley can be reached on (703)-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andy S. Rao  
Primary Examiner  
Art Unit 2613

asr  
November 1, 2004

ANDY RAO  
PRIMARY EXAMINER  
